Skybox Imaging

Your World on Demand

JACIE Conference

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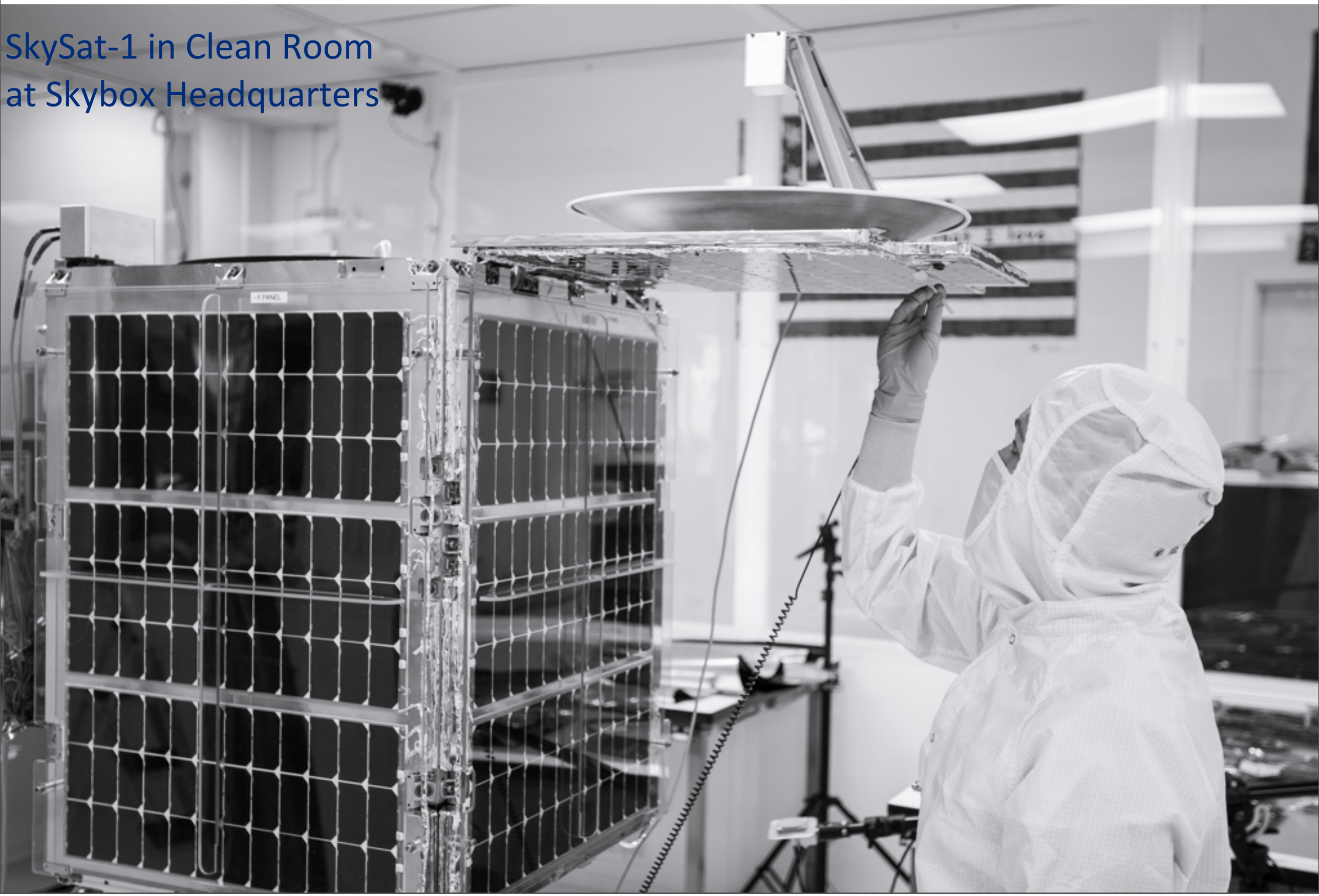
THE SKYBOX VISION

Deliver unprecedented insight into daily global activity to change the way businesses make decisions and people view the world

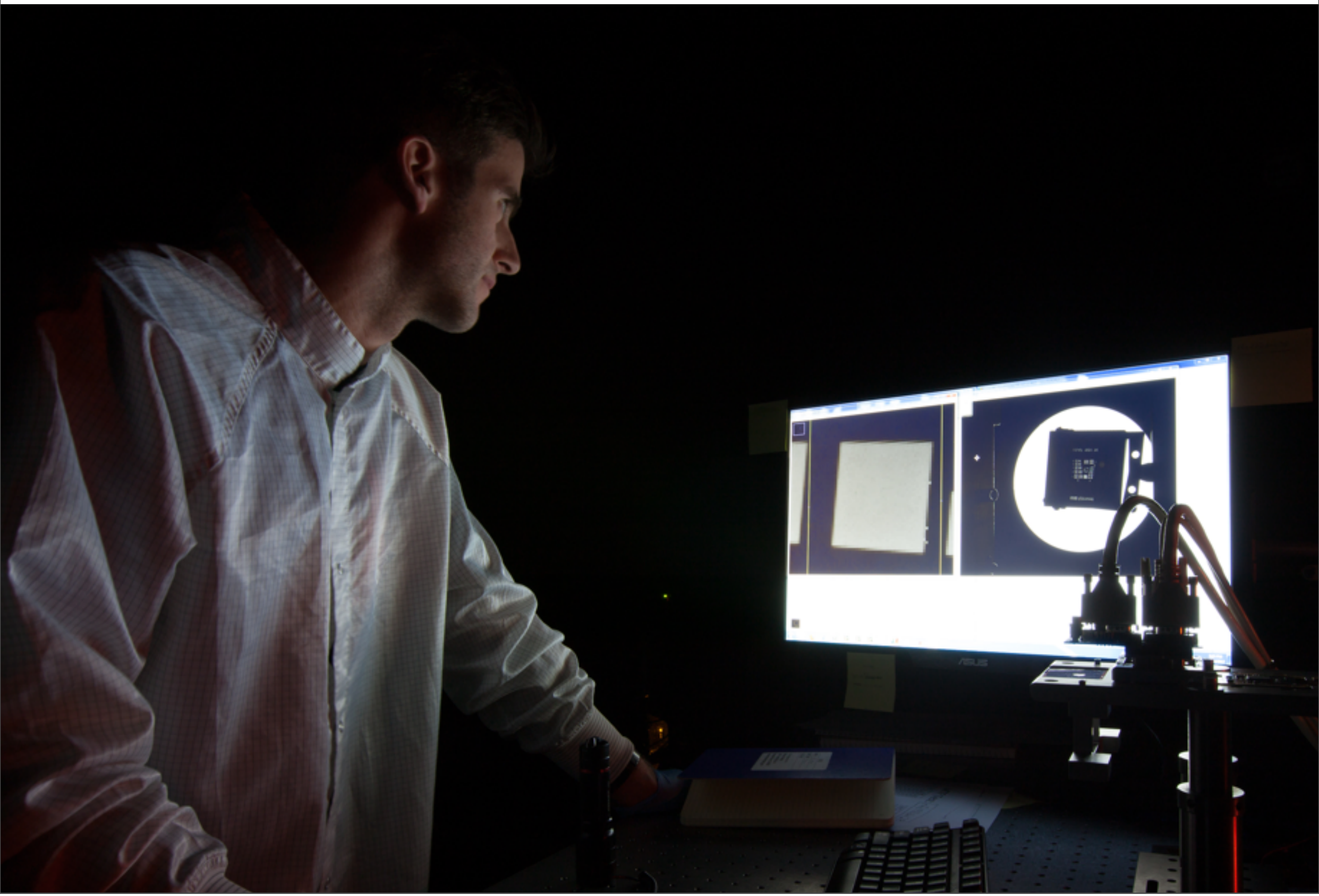

How we achieve our vision

We build our own satellites

SkySat-1 in Clean Room
at Skybox Headquarters



and our own imaging systems

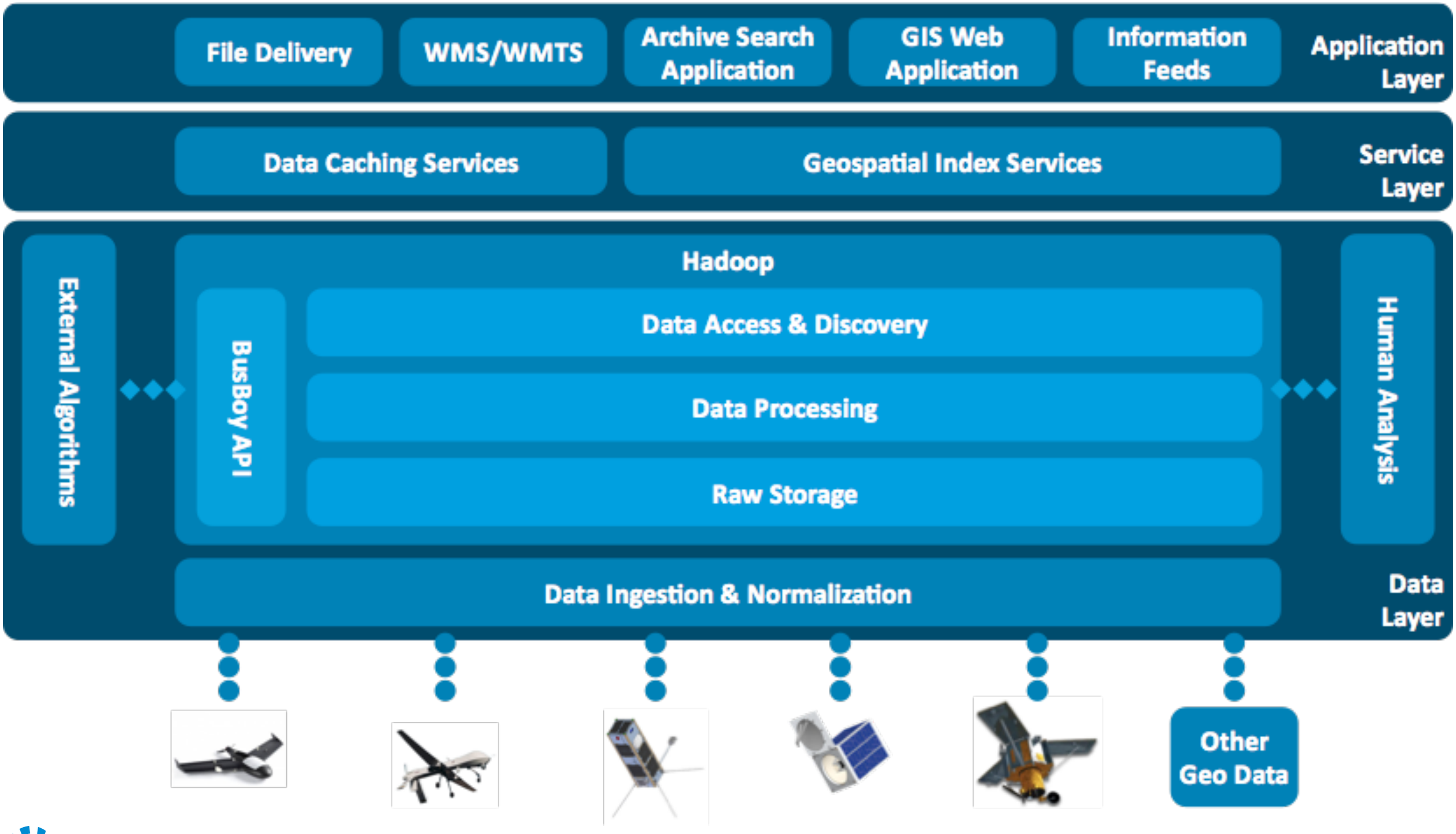


We launch our own satellites

and we operate them

Skybox Imaging

We built our own data platform



We do all of this to provide Easy Access to Geospatial Information Services

Direct Access

Premium direct tasking, downlink, and imagery production services at customer locations through our SkyNodes systems

Imagery & Video

Easy-to-access sub-meter, multispectral satellite imagery and full motion HD video from anywhere in the world

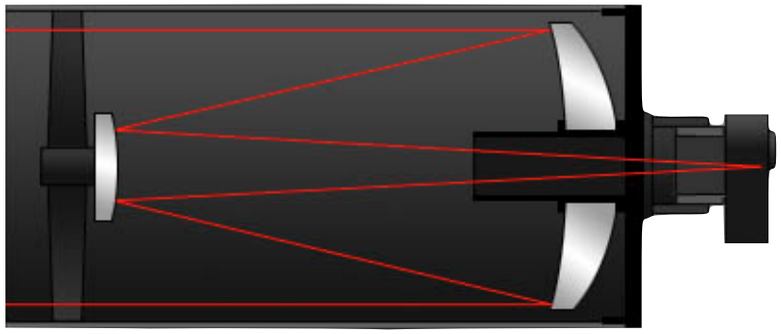
Analytics

Geospatial information products that analyze & aggregate data across large imagery datasets

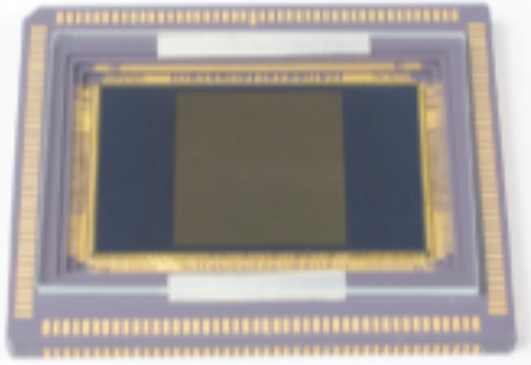
Skybox Imaging

Skybox Imagery

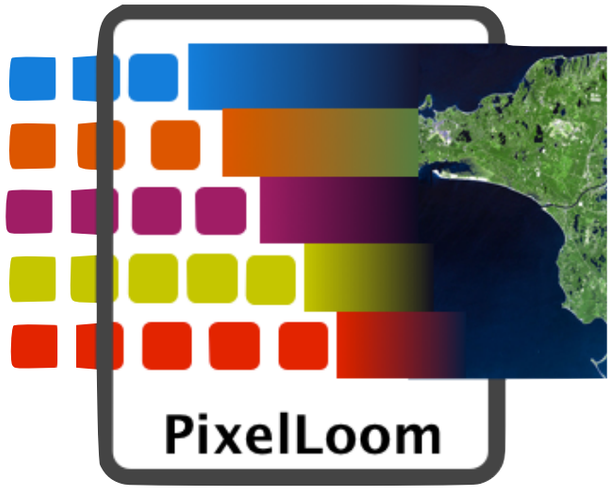
The Skybox Imaging Architecture



Telescope



2-Dimensional
Detectors



Ground-based
Image Processing

Silicon Carbide Cassegrain telescope: Stamp & Repeat molded design for high-volume manufacture

Low-noise, high-frame rate, global-shutter CMOS imaging detectors

Onboard real-time camera calibration & JPEG 2000 image compression

Proprietary ground-based image processing algorithms

Web scale Hadoop-based production platform

Worlds first sub-meter high-performance EO platform using 2-dimensional sensor

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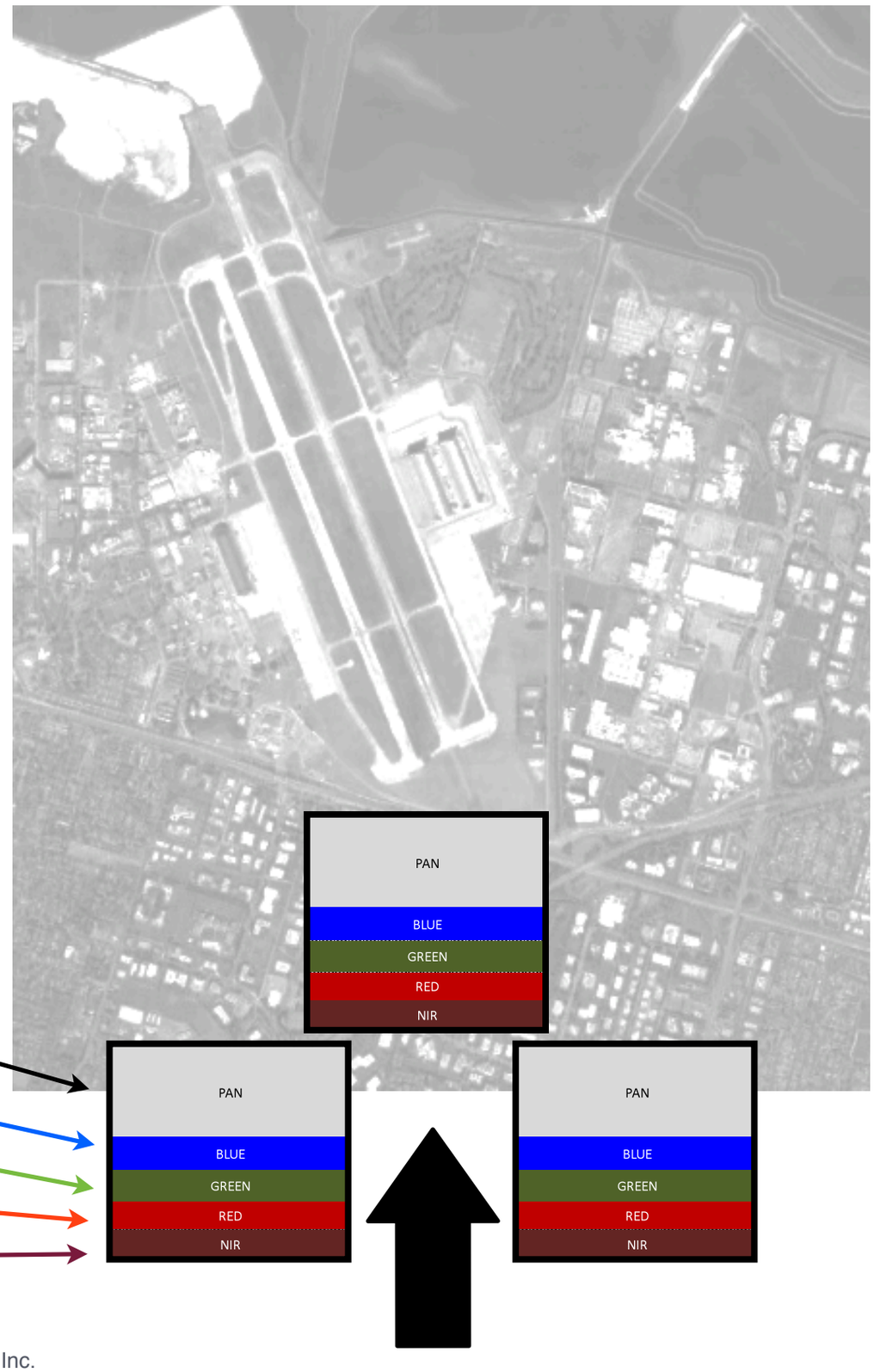
SkySat Imagery Formation

SkySat uses a **pushframe** architecture (patent pending)

- 3x imaging detectors capture many overlapping 2D images very high frame rate
- Images are compressed with JPEG 2000 and transmitted to the ground
- Ground-based image processing algorithms blend the data into high-quality imagery products (“Ground-based TDI”)



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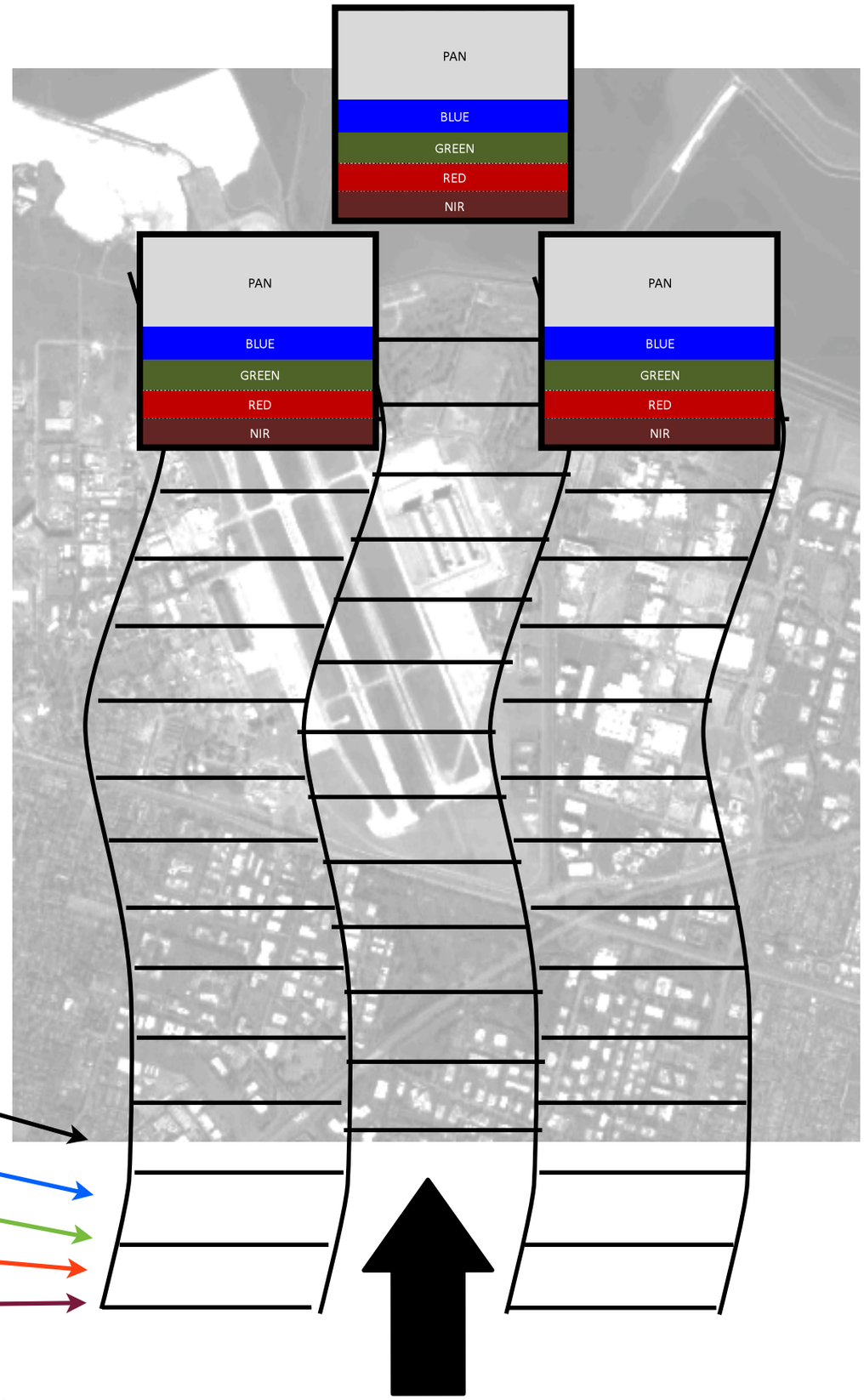

Skybox Imaging

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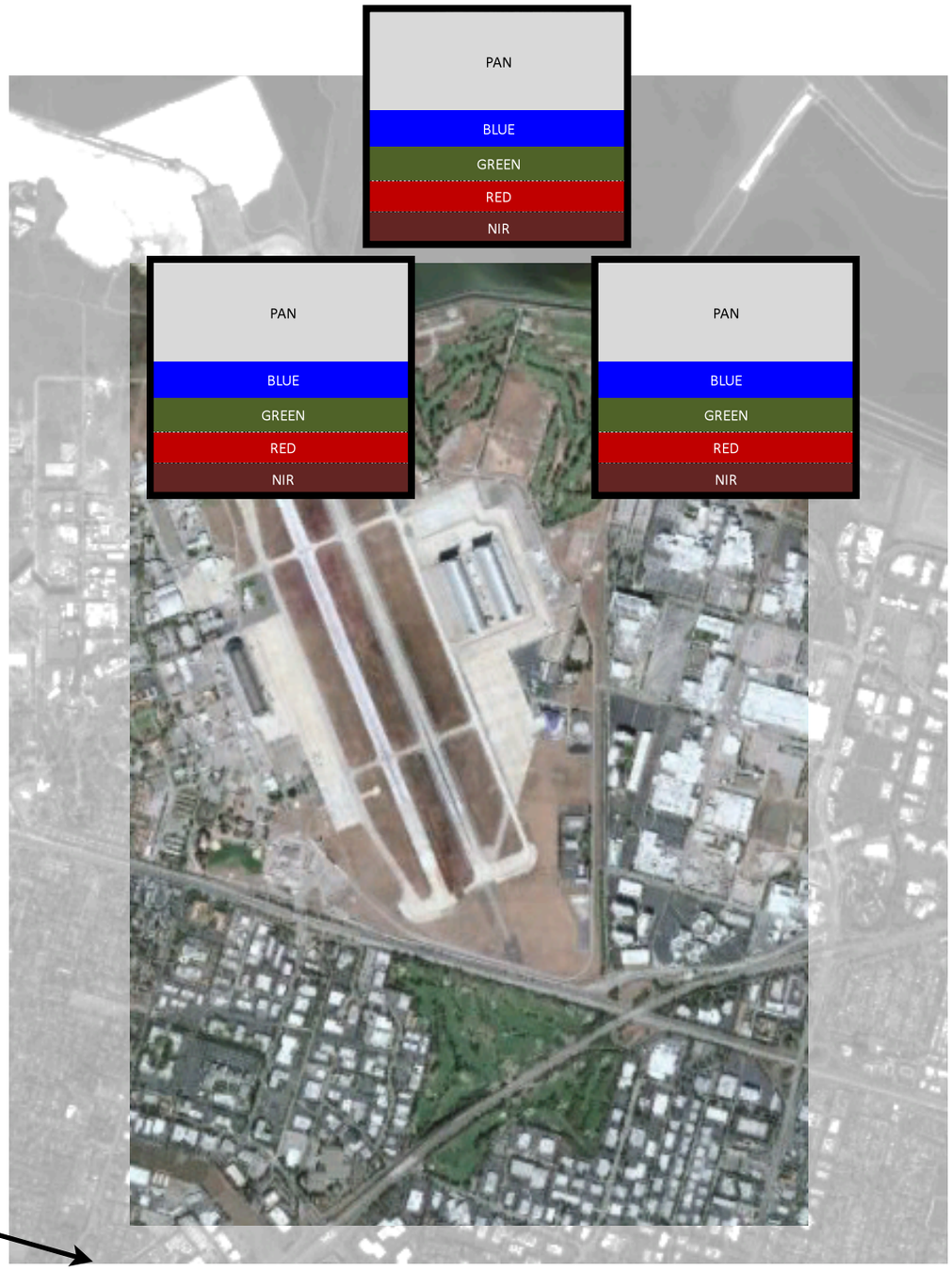

Imagery & Video Products

High Fidelity Imagery

Sub-meter multispectral still imagery

Geo & Ortho Imagery: For large-area geospatial imagery customers who want a single-scene, map images

Snapshot: For visual customers who want small format (1x2 km) high-quality pictures

Image Frames: For advanced customers who want minimally processed data & the necessary metadata necessary to build their own map mosaics

High Definition Video

High definition panchromatic (B&W) video

Raw Video: For advanced customers who want minimally-processed raw panchromatic video & frames in order to do advanced processing using their own workflows.

Stabilized Video: For customers who want a viewable video sequence without collection drift

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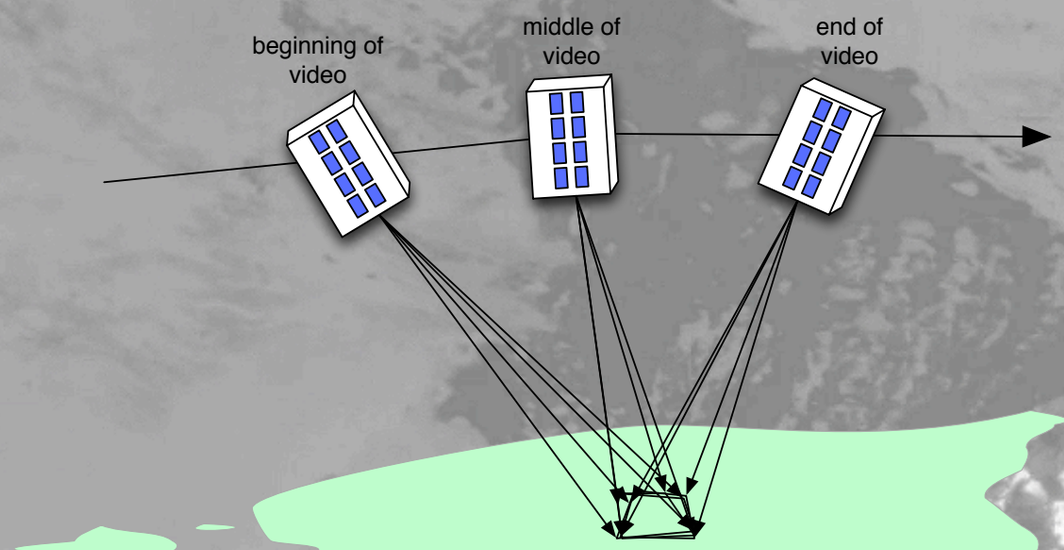
World's first commercial HD high-resolution full-motion video of earth from space



SPECIFICATIONS	SKYSAT-1 & SKYSAT-2
Color	Pan (black & white)
Duration	Up to 90 seconds
Frame Rate	30 frames per second
GSD	1.1 m @ nadir
FOV	2 km X 1.1 km
File Format	H.264 (.mp4)

Download the video @ http://vimeo.com/86196806

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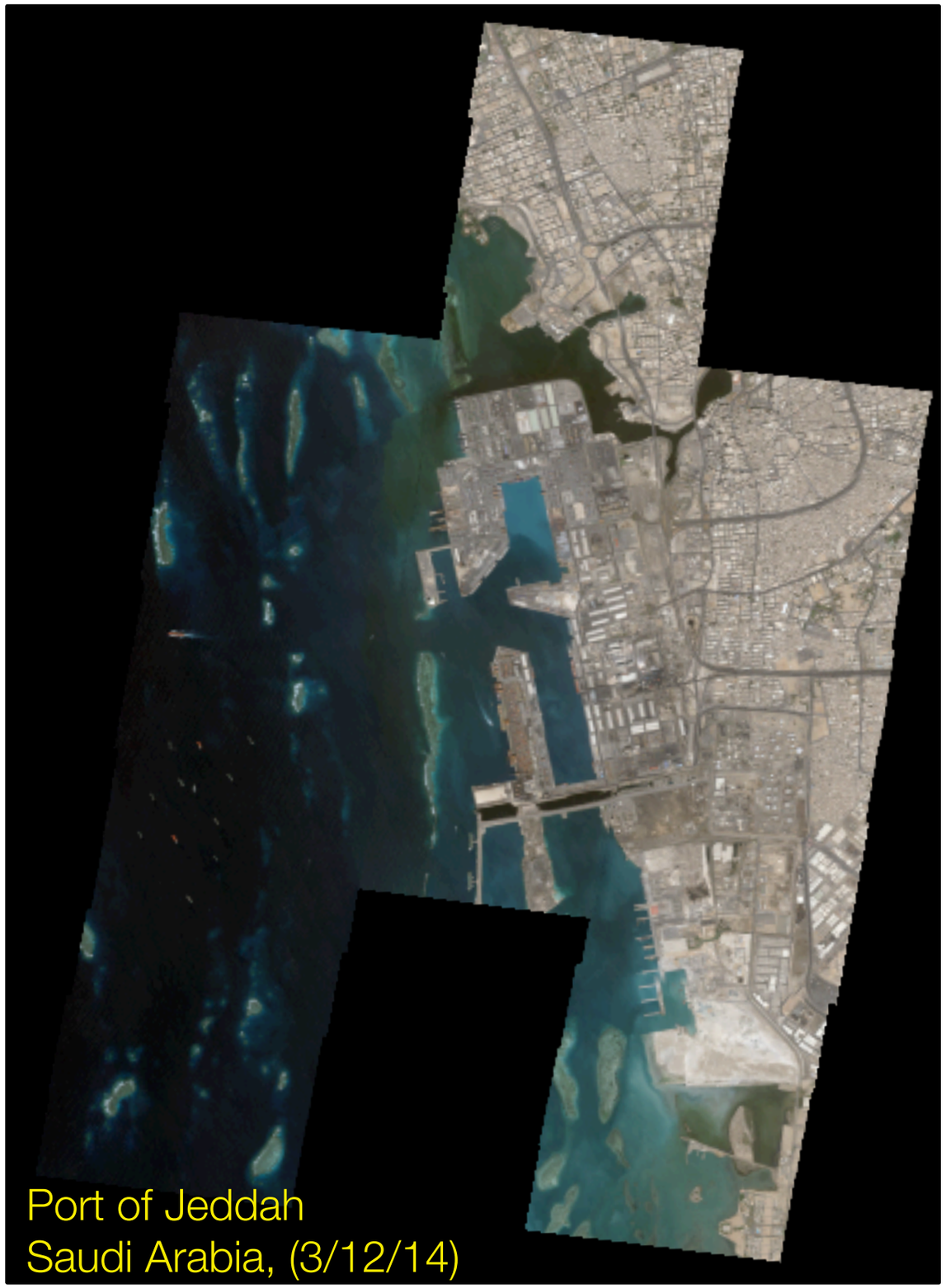
Geo & Ortho Imagery Products



Geo Imagery: Geo-referenced imagery. North-oriented for immediate analysis in a geospatial context. Referenced to a single elevation value, allowing for subsequent orthorectification by advanced users

Ortho Imagery: orthorectified imagery. North-oriented and terrain-corrected for immediate geospatial analysis. Co-registered to map reference allowing for temporal analysis.

SPECIFICATIONS	SKYSAT-1 & SKYSAT-2	
Image Bands	Pan	450 - 900 nm
	Blue	450 - 515 nm
	Green	515 - 595 nm
	Red	605 - 695 nm
	Near-IR	740 - 900 nm
Panchromatic GSD	90 cm @ nadir	
Multispectral GSD	2 m @ nadir	
Swath Width	8 km @ nadir	
Strip Length	up to 100 km	
File Format	GeoTIFF	
Bit Depth	11 Bit	

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Image Frames Product

SNAPSHOT SPECIFICATIONS	SKYSAT-1 & SKYSAT-2
Image Bands	Pan 450 - 900 nm Blue 450 - 515 nm Green 515 - 595 nm Red 605 - 695 nm Near-IR 740 - 900 nm
Panchromatic GSD	90 cm @ nadir
Multispectral GSD	2 m @ nadir
Swath Width	1.1 km x 2.7 km @ nadir
Bit Depth	11 Bit

Image Frames: Collection of panchromatic, MSI, and pan-sharpened image frames with detailed metadata for advanced processing. Suitable for additional product creation, including orthorectification and mosaicking

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SkySat 1: Image Resolution (90 cm)

SkySat-1 can see a windshield of a car from space

Next generation SkySats will be even better (70 cm)

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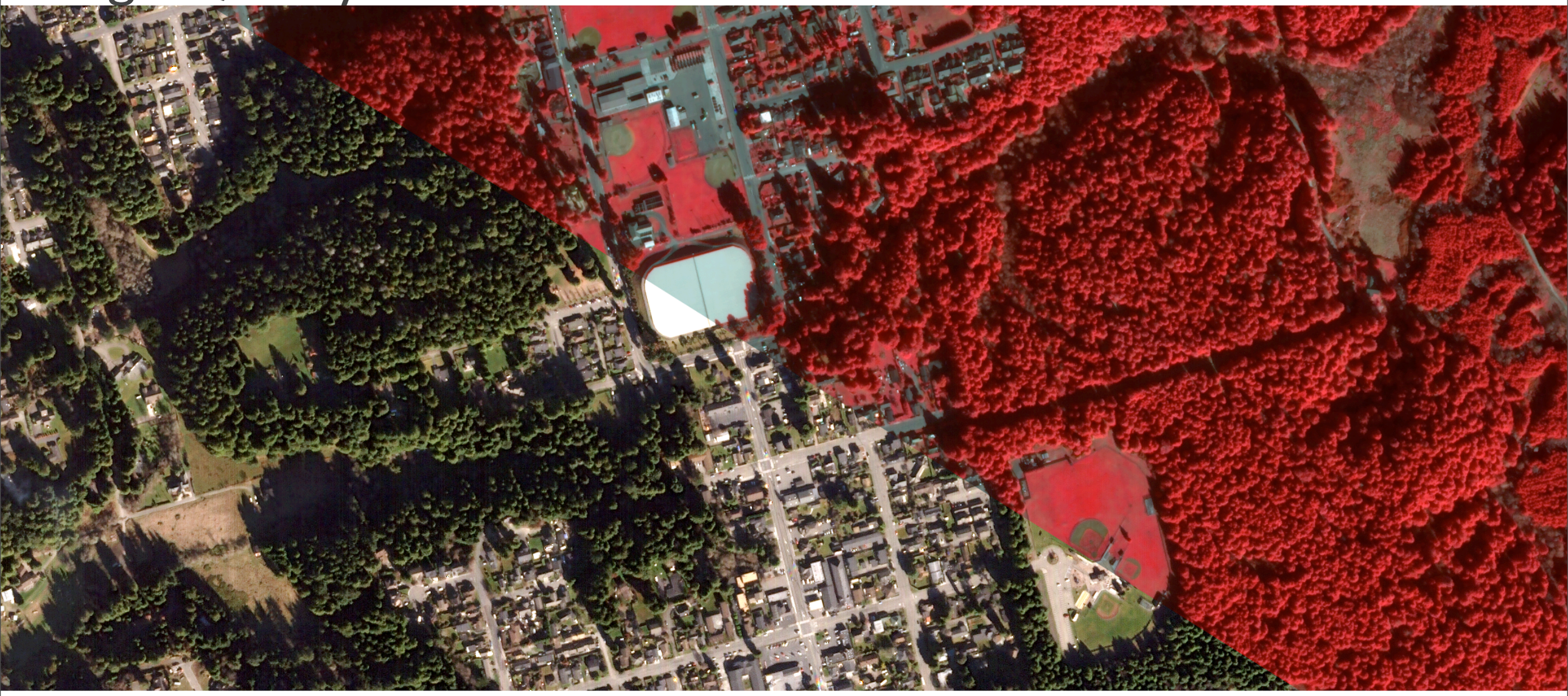
High Quality Color



Photographic Image

Near-infrared Image

- 2:1 MSI to Pan ratio enables high-quality pan-sharpened imagery products
- RGB enables natural “photographic” color reproductions
- Near Infrared (NIR) band enables vegetation index calculations

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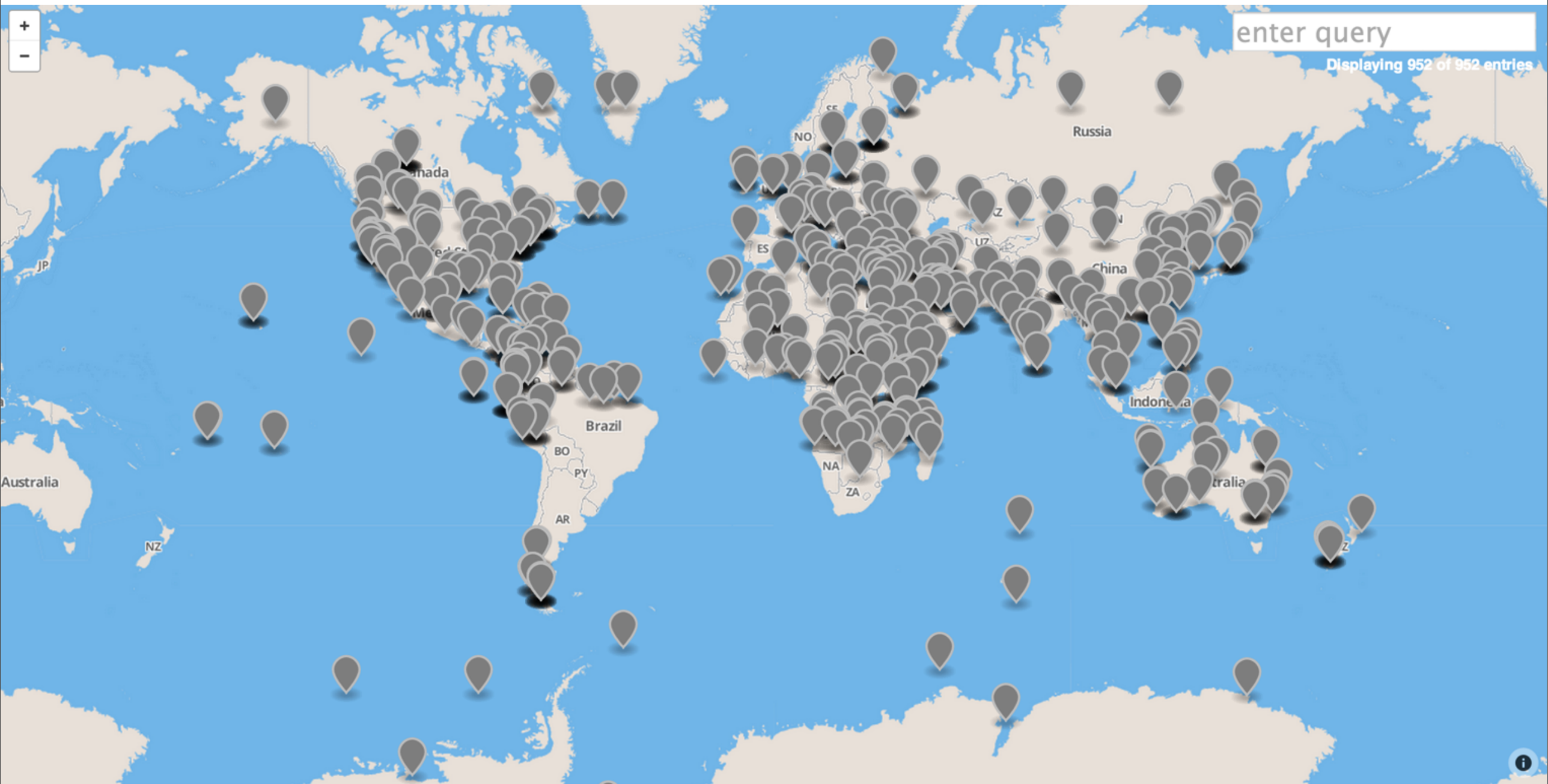
What have we been taking pictures of during commissioning?



Monitoring shipping lanes

Panama Canal Gatun Locks
1/18/2014

Monitoring shipping lanes

Panama Canal Gatun Locks
2/2/2014

Analyzing air transport

Juba International Airport, South Sudan 12/19/13

Quantifying oil movements

Ras Tanura Refinery,
Saudi Arabia 1/11/14

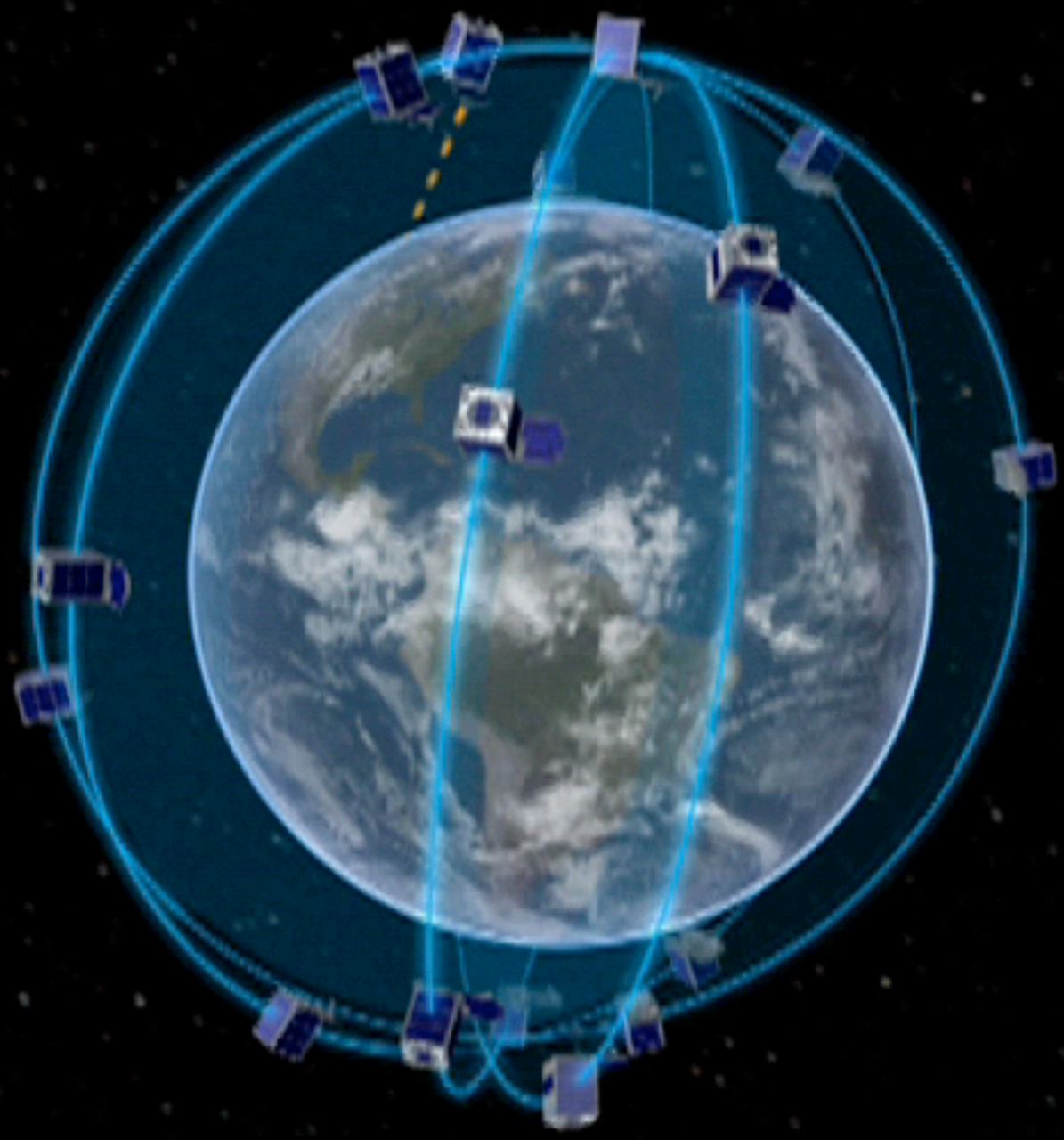

Ras Tanura Refinery on 1/11/14
Millions of barrels of oil flow in & out each day


Ras Tanura Refinery on 1/12/14
Millions of barrels of oil flow in & out each day

Watching cities grow

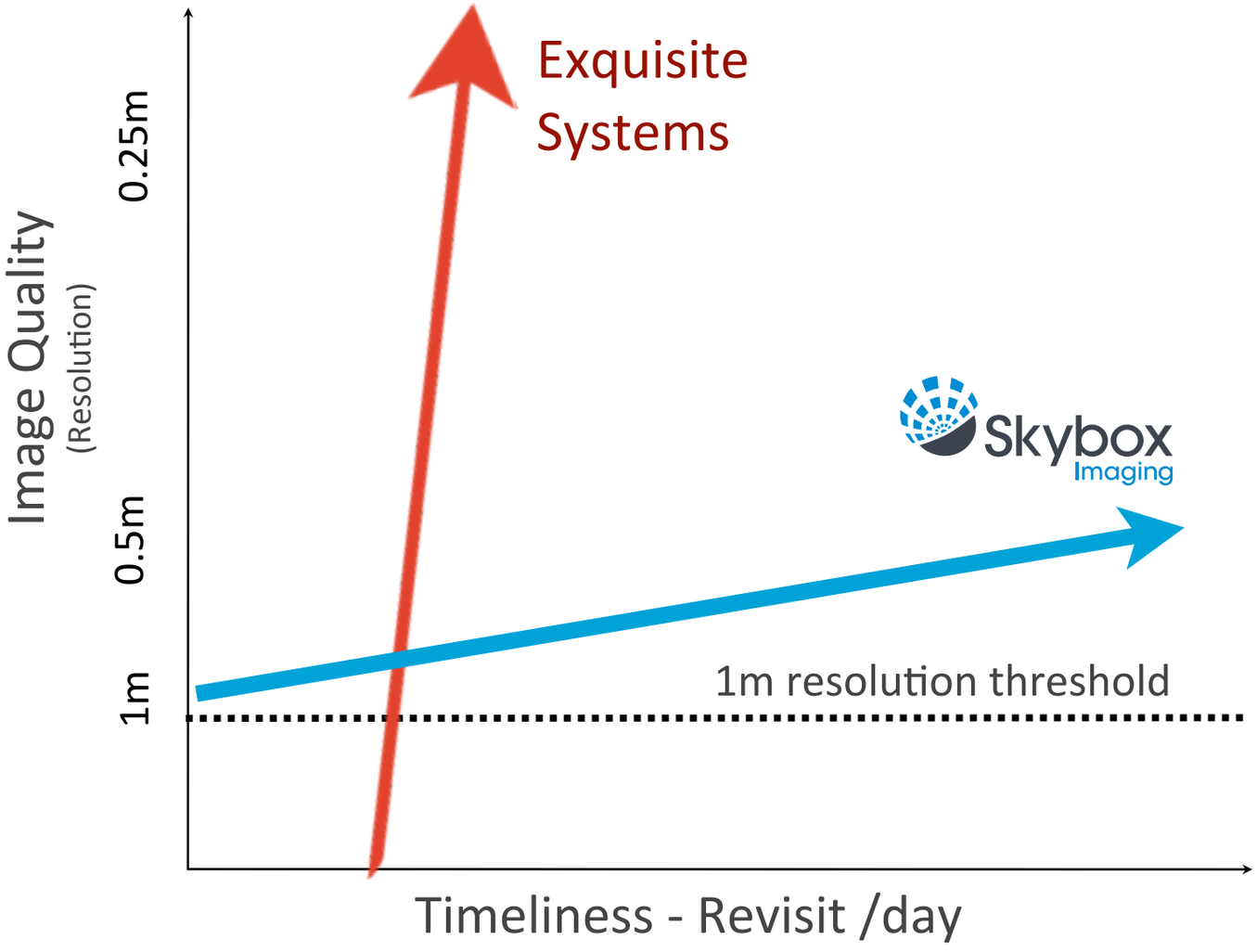
Dameisha Beach in
Shenzhen, China (1/15/14)

Where is Skybox heading?



How Skybox views the world

Mapping:
Industry of today



Monitoring & Information Services:

Requires high-frequency revisit to measure the changes on an hourly basis

- Infrastructure monitoring
- Economic leading indicators
- Natural disaster response

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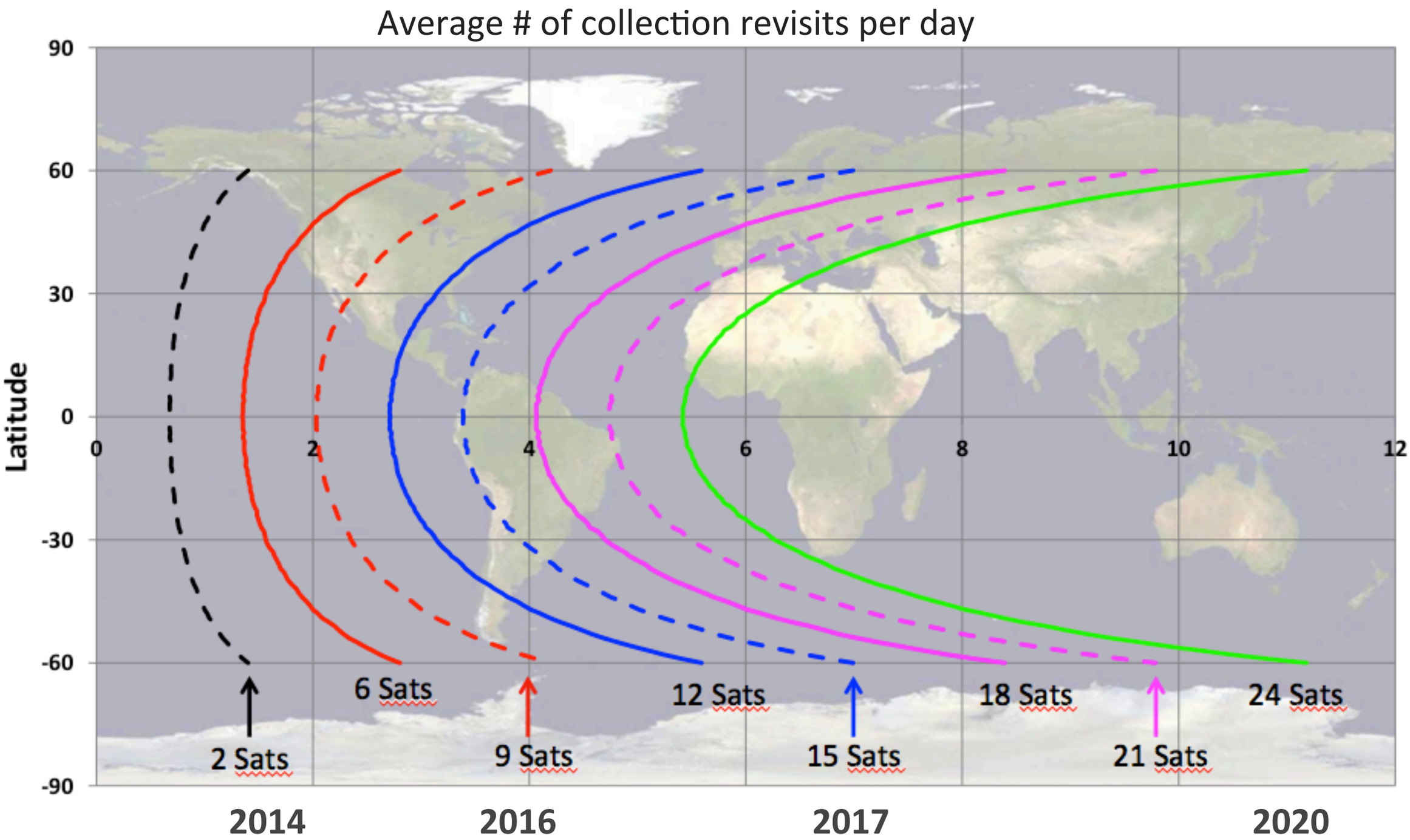
Our roadmap



Skybox Imaging

Get in Touch.

We are continually seeking to expand our partner network. Technology innovators, data providers, service providers, distributers, software integrators - we'd love to talk to you.

Feel free to email us at partners@skybox.com.

We look forward to hearing from you.

www.skybox.com

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